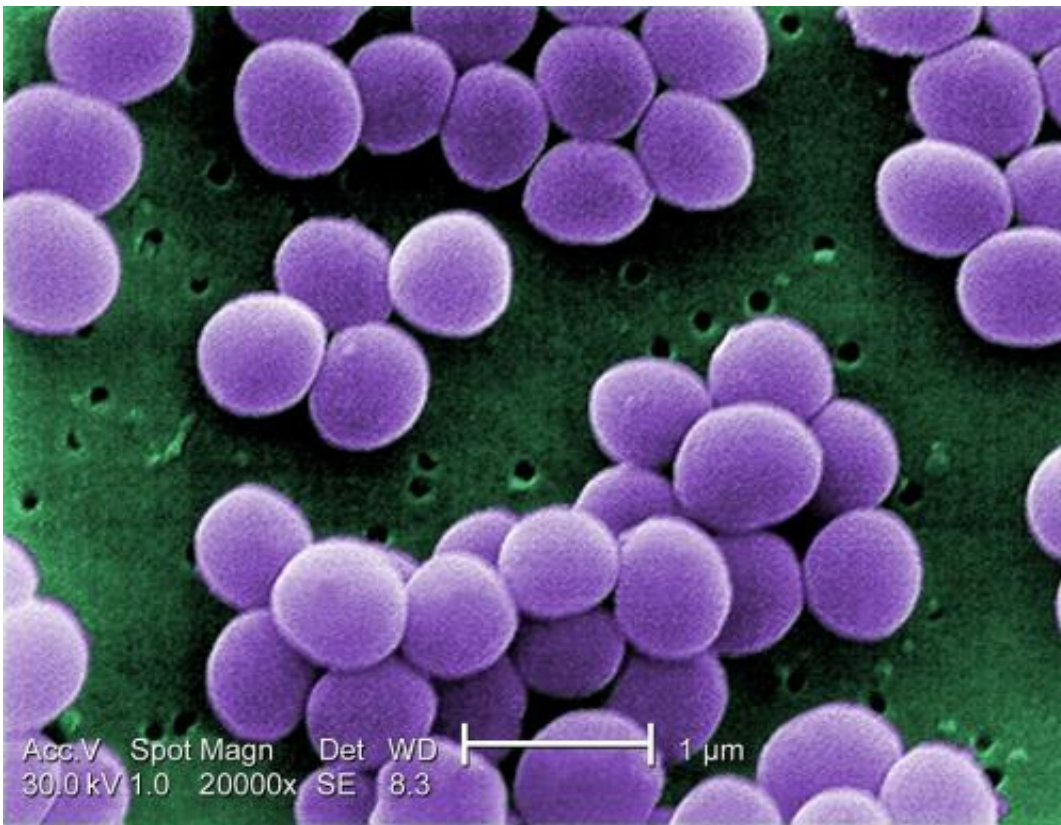


Technology leads to better treatment for *Staphylococcus aureus* sepsis

June 5 2017



Scanning electron micrograph of *S. aureus*; false color added. Credit: CDC

A new testing and treatment approach led to shorter hospital stays for patients with *Staphylococcus aureus* bloodstream infections. Study results were presented at the ASM Microbe 2017 conference in New Orleans, LA, on June 3, 2017.

Staphylococcus aureus can cause a wide range of infections, including skin and [soft tissue infections](#), bloodstream infections, and pneumonia. *S. aureus* bloodstream infections can be fatal, and timely targeted therapy is associated with better outcomes. The new approach included a rapid, molecular test from a positive blood culture to identify *S. aureus* and detect the [antibiotic resistance gene](#) *mecA*, found in methicillin-resistant *S. aureus* (MRSA). The lab result was communicated to the doctor and to a pharmacist, who provided input on antibiotic therapy. The new testing technology reduced the time to identification in the laboratory from approximately one day to one hour. This meant the doctors and pharmacists were able to get patients on the right antibiotic at least one day sooner. On average, these patients got out of the hospital two to three days earlier and were less likely to be readmitted.

Patients with *S. aureus* bacteremia were identified from blood culture, and an equivalent number of patients were assessed before and after implementation of the new lab test and treatment approach. Outcome measures included length of hospital stay, 30-day readmission rate, 30-day all-cause mortality, and antibiotic usage. The study authors estimate the increased cost of lab testing was recovered in lower charges for shorter hospitalizations. Similar studies have been conducted at large academic hospitals, and this comparison study demonstrates the feasibility and importance of implementing new laboratory technology and best practice approaches in the community hospital setting. Microbiology director Marijo Roiko, microbiology supervisor Susan Kuntz, and antibiotic stewardship pharmacist Kevin Kern conducted this analysis at Altru Health System in Grand Forks, ND.

Provided by American Society for Microbiology

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